Message Text

UNCLASSIFIED

PAGE 01 CAIRO 00624 121415Z ACTION ERDA-07

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E.O. 11652: N/A

TAGS: ENRG, OSCI, TPHY, EG

SUBJECT: SOLAR ENERGY PROPOSALS

REF: 76 CAIRO 17434

1. SUMMARY

DR. MOSTAFA E. TALAAT, UNIV. OF MD., PRINCIPAL INVESTIGATOR NSF SOLAR ENERGY PROJECT WITH NRC CALLED ON SCIATT 1/10/76 TO SUMMARIZE DISCUSSIONS HE HAD WITH GOE OFFICIALS DURING PAST MONTH. DR. TALAAT MET WITH MINISTER OF ELECTRIC POWER AND ENERGY AHMED SULTAN, THE MINISTRY'S SOLAR ENERGY COMMISSION AND WITH NRC. TALAAT EXPLORED INTERESTS IN THREE APPLIED SOLAR ENERGY PROJECTS WITH MINISTRY:

A) SOLAR IRRIGATION PUMPS, B) SOLAR THERMAL POWER PLANT,

C) PHOTO VOLTAIR CELL FOR POWER AND WATER HEATING. TALAAT RETURNING TO WASH. JAN. 11, INTENDS TO DISCUSS FINDINGS WITH ADDRESSEES.

2. DESCRIPTION OF CONCEPTS FOLLOWS:

A) SOLAR IRRIGATION PUMP

INSTALL A 25HP UNIT SIMILAR TO ARIZONA STATE SYSTEM ON AN EGYPTIAN FARM TO PUMP WATER FROM CANALS. COMPARISON TO BE MADE WITH OTHER PUMPING SYSTEMS NOW IN USE.

B) SOLAR THERMAL POWER PLANT

ADAPT AND INSTALL A 100/200 KW POWER PLANT TO FEED DIRECTLY UNCLASSIFIED

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INTO ELECTRICAL GRID. INSTALLATION PREFERABLY WOULD BE "TOTAL ENERGY SYSTEM" USING EXHAUST AS HEAT SOURCE FOR SOME OTHER PROCESS.

C) SOLAR-PHOTOVOLTAIC POWER INSTALLATION
ADAPT AND INSTALL 10 KWE PHOTOVOLTAIC DEVICE TO DRIVE WATER
PUMP STORAGE SYSTEM FOR A BUILDING (MIN. SULTAN SUGGESTED
HIS MINISTRY). THE REJECT HEAT OF THE CELLS COULD BE USED TO

HEAT WATER FOR THE BUILDING.

- 3. TALAAT HAS SUGGESTED THAT THE UNIV. OF MD. COLLABORATE WITH THE MINISTRY IN SYSTEMS PLANNING/INSTALLATION/ADAPTATION, SITE SELECTION; EVALUATION OF RESULTS AND RE-ENGINEERING IF INDICATED. ACCORDING TO HIM, MINISTER SULTAN WAS VERY INTERESTED AND ASKED THAT CONTACT BE MAINTAINED WITH UNDERSECRETARY MAHER ABBAZA AND KEY MEMBERS OF SOLAR ENERGY COMMISSION (DR. MAHMOUD EL KOSHERI; CHAIRMAN; DR. FAUD TAHER, SECRETARY). ABBAZA IS TO FORWARD THROUGH EMBASSY, A REQUEST THAT CONCEPTS DISCUSSED WITH TALAAT BE FURTHER PURSUED WITH USG. TALAAT WILL ALSO TALK WITH ERDA, NSF AND AID ON HIS RETURN. HE DID NOT HAVE CHANCE TO TALK WITH AID/C WHILE HERE.
- 4. TALAAT SAID THAT CAIRO AND AIN SHAMS UNIVS. ARE INTERESTED IN DEVELOPING COURSES IN ENERGY CONVERSION. HE MAY BE INVITED BY CAIRO UNIV. TO SPEND SABBATICAL YR BEGINNING SEPT. '77. HE IS NOW ADVISING TWO NRC GRADUATE STUDENTS WHO ARE WORKING ON MAGNETS HYDRODYNAMICS (MHD) CONCEPTS.
- 5. HE ALSO CONSULTED WITH DR. SAQR OF NRC ON NSF PROJECT AND ADVISED ON DESIGN OF STEAM TURBINES TO BE POWERED BY SOLAR GENERATOR AND ON COMPLETION OF DESIGN OF 100KW HELIOSTAT. TALAAT NOT ENTIRELY SATISFIED WITH PROJECT RATE OF PROGRESS AND ADMINISTRATIVE ARRANGEMENTS WITH NEW MEXICO STATE UNIV. MATTHEWS

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